



NOAA FISHERIES

Office of Aquaculture

Growth of American marine aquaculture is an opportunity to support local seafood production, strengthen coastal community resilience, and ensure a safe, secure, and sustainable supply of seafood.

Pacific Islands Region Aquaculture



AQUACULTURE IN THE REGION

Aquaculture in the Pacific Islands spans from Hawai'i and American Samoa in the Central Pacific, to the Commonwealth of the Northern Mariana Islands and Guam in the Western Pacific. The region produces a variety of crustaceans, finfish, mollusks, and algae for consumption, with most of the commercial production in Hawai'i.

Hawai'i is a hub for cutting edge research and development of new marine technology, including open ocean finfish aquaculture. In 1999, with help from NOAA Sea Grant, it became the first place in the world with a commercially operating ocean-lease, offshore cage aquaculture system. The state also hosts many aquaculture startups and an accelerator at the Hawai'i Ocean Science and Technology Park.

Blue Ocean Mariculture off the coast of Kona demonstrates that commercial offshore aquaculture can be environmentally sustainable. Its open ocean marine finfish farm produced 566 metric tons of Hawaiian Kanpachi (Almaco jack, *Seriola rivoliana*) in 2018. Kanpachi is a high value product, and while it is native to the region, there is no commercial fishery in Hawai'i. The increase in Kanpachi production and value is an example of how aquaculture is expanding markets and creating economic opportunities.

Efforts are underway to establish a regional permitting process to manage the development of an environmentally and economically sustainable aquaculture industry in federal waters.

ECONOMIC BENEFITS OF AQUACULTURE

U.S. marine aquaculture is an important industry. In many fishing and coastal communities, it creates year-round jobs that support resilient working waterfronts and economic development. Aquaculture sales in Hawai'i totaled \$76.4 million in 2017, of which algae contributed \$35.1 million, according to the U.S. Department of Agriculture.

Nationwide, aquaculture production is valued at \$1.5 billion. The industry also supports sectors such as seafood processing, feed and equipment manufacturing, and food service.

TRADITIONAL AQUACULTURE IN HAWAI'I

Loko i'a (traditional Hawaiian fishponds) are a vital component of native Hawaiian communities and are valuable cultural and ecological resources. The fishponds allow practitioners to trap and grow fish, which they harvest as needed. Over the years, many fishponds have fallen into disrepair and few have been restored to operational levels. However, many groups are working to restore these resources across Hawai'i to perpetuate the loko i'a tradition and provide nutritious and sustainable food resources for communities in Hawai'i.

NOAA Fisheries supported the State of Hawai'i and other organizations in the development of a master permit and guidance document for the repair, restoration, maintenance,

and operation of traditional Hawaiian fishponds. The Pacific Islands region also regularly supports loko i'a stewardship and education efforts through competitive grants.

AQUACULTURE BY THE NUMBERS

- Oceans cover over 70% of the Earth's surface, but account for only 2% of food production. With limited arable land and fresh water, the world is turning to the oceans for additional food as the global population is projected to increase to 9 billion by the year 2050.
- The U.S. aquaculture industry produced \$1.5 billion worth of seafood in 2018, with 39% of that value coming from the Pacific Islands region.
- The U.S. aquaculture industry is currently focused on production of high-value food species. Thus, while the value of U.S. aquaculture production equals about 21% of the value of total U.S. seafood production, the volume equals about 7% of the total production.
- Globally, aquaculture supplies more than 50% of all seafood produced for human consumption—this percentage continues to rise.



For more information about aquaculture in the Pacific Islands, contact Regional Aquaculture Coordinator Tori Spence-McConnell (tori.spence@noaa.gov).

